REMARKS

Claims 1-83 are pending in the application; the status of the claims is as follows:

Claims 1-20, 23, 27, 29-39, 44, and 46-79 are withdrawn from consideration.

Claim 81 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 80, 81, and 83 are rejected under 35 U.S.C. § 102(e) as being anticipated by M. Loose et al, Self-Calibrating Logarithmic CMOS Image Sensor with Single Chip Camera Functionality ("Loose").

The allowance of claims 21, 22, 24-26, 28, 40-43, and 45, by the Examiner, is noted with appreciation.

Claim 82 is objected to as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The acknowledgement, in the Office Action, of a claim for foreign priority under 35 U.S.C. § 119(a)-(d), and that the certified copy of the priority document has been received, is noted with appreciation.

The indication, in the Office Action, that the Examiner has no objections to the drawings filed on July 19, 2000, is noted with appreciation.

Claims 80 and 81 have been amended to correct matters of form and new claim 84 has been added. These changes are not necessitated by the prior art, are unrelated to the patentability of the invention over the prior art, and do not introduce any new matter. The

features of claims 80 and 84 are supported by at least the paragraph on page 105, lines 9-18.

35 U.S.C. § 112 Rejection

The rejection of claim 81 under the second paragraph of 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention, is respectfully traversed based on the following.

Claim 81 has been amended to specify that the first electrode and control electrode are that of the first transistor. Accordingly, it is respectfully requested that the rejection of claim 81 under the second paragraph of 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention, be reconsidered and withdrawn.

35 U.S.C. § 102(e) Rejection

The rejection of claims 80, 81, and 83 under 35 U.S.C. § 102(e) as being anticipated by Loose, is respectfully traversed based on the following.

Because the Loose reference is not a patent or patent application, it is assumed that this was intended to be a rejection under 35 U.S.C. §102(a) or (b). However, because there is no date on the reference, it is not clear if the reference is prior art. Nonetheless, Applicants respectfully submit that claims 80, 81 and 83 are patentably distinguishable from the Loose reference.

Loose shows a photo detection circuit including a photodiode. Two transistors, M_1 and M_2, are biased to operate in the subthreshold region. In normal operating mode, the photodiode is connected in series with transistors M_1 and M_2 by switch S_2. The output of the photodector is buffered by transistor M_3 and output to V_{out2} via switch S_4.

In order to be properly calibrated, the appropriate charge must be placed on capacitor C. To accomplish this, a calibration mode is included. In this mode, the photodiode is replaced in the circuit by a current reference I_{ref}. In addition, the source of transistor M_3 is connected to a current source and a calibration comparator. The other input to the calibration comparator is a reference voltage V_{ref}. This voltage is selected so that, when the proper charge is on capacitor C, the voltage on V_{out1} is equal to V_{ref}. Therefore, if voltage on the gate of transistor M_1 has deviated from specifications due to leakage or other factors, the voltage is brought to the proper state during the calibration mode.

In contrast to the cited reference, claim 80 includes:

said controller temporarily feeding a second voltage to the second electrode of the first transistor during the first switching element is turned off, said second voltage being different from the first voltage so that the individual pixels are brought into a substantially identical initial state.

According to the terms of claim 80, the photosensitive element must be connected to the first electrode of the first transistor via the first switching element. Therefore, transistor M_2 is the only transistor in Loose that could potentially be considered to correspond to the first transistor of claim 80.

However, the only voltage controlled during the calibration mode is the voltage on the gate of transistor M_2. Loose does not show or suggest applying any defined voltage to any element of transistor M_1. Thus, Loose does not show every element of claim 80 and does not anticipate claim 80. MPEP §2131.

Even assuming for the sake of argument that the application of a voltage to the gate of transistor M_2 produces some derivative voltage on the source of transistor M_1, the voltage thus derived would be the same voltage as is applied during readout mode. That is, the entire purpose of the calibration cycle is to fix the voltage on the gate of transistor M_1 so that this voltage is set for the readout cycle. Therefore, Loose does not show or

suggest applying a first voltage to the second electrode at one time and applying a second voltage distinct from the first voltage to the second electrode at another time. Thus, the Loose reference also does not meet these limitations of claim 80. Claims 81 and 83 are dependent upon claim 80 and thus include every limitation of claim 80. Therefore, claims 81 and 83 are also patentably distinct from the cited references.

Accordingly, it is respectfully requested that the rejection of claims 80, 81, and 83 under 35 U.S.C. § 102(e) as being anticipated by Loose, be reconsidered and withdrawn.

New Claim

New claim 84 is dependent upon claim 80, and thus includes the patentably distinct limitations of claim 80. Further, claim 84 includes an apparatus wherein the second voltage causes a higher current to flow through the first transistor than the current flow through the first transistor during image sensing. Therefore, claim 84 is patentably distinct from the cited references.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment increases the total number of claims by one from 83 to 84, but does not present any multiple dependency claims and does not increase the number of independent claims. Accordingly, a Response Transmittal and Fee Authorization form authorizing the amount of $50.00 to be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260 is enclosed herewith in duplicate. However, if the Response Transmittal and Fee Authorization form is missing, insufficient, or otherwise inadequate, or if a fee, other than the issue fee, is required during the pendency of this

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application, please charge such fee to Sidley Austin Brown & Wood LLP's Deposit
Account No. 18-1260.

If an extension of time is required to enable this document to be timely filed and
there is no separate Petition for Extension of Time filed herewith, this document is to be
construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a)
for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee
required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee,
and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's
Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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